

## **RAW SEQUENCE LISTING**

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Application Serial Number: 10/568,033  
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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/568,033

DATE: 11/15/2006  
TIME: 11:50:15

Input Set : A:\SPO-125.ST25.txt  
Output Set: N:\CRF4\11152006\J568033.raw

3 <110> APPLICANT: Nakajima, Toshihiro  
 4 Amano, Tetsuya  
 5 Yagashita, Naoko  
 7 <120> TITLE OF INVENTION: THERAPEUTIC PREPARATION FOR HEMATOPOIETIC DISEASE  
 9 <130> FILE REFERENCE: BHP-A0301P  
 11 <140> CURRENT APPLICATION NUMBER: US 10/568,033  
 12 <141> CURRENT FILING DATE: 2006-02-10  
 14 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/011951  
 15 <151> PRIOR FILING DATE: 2004-08-13  
 17 <150> PRIOR APPLICATION NUMBER: US 60/495,001  
 18 <151> PRIOR FILING DATE: 2003-08-13  
 20 <160> NUMBER OF SEQ ID NOS: 4  
 22 <170> SOFTWARE: PatentIn Ver. 2.0  
 24 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 3374  
 26 <212> TYPE: DNA  
 27 <213> ORGANISM: Homo sapiens  
 29 <220> FEATURE:  
 30 <221> NAME/KEY: CDS  
 31 <222> LOCATION: (403)..(2256)  
 33 <400> SEQUENCE: 1  
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 38 gattttcttg ccacagcatc cattctgggtt aggctggta tcttctgagt agtgatagat 180  
 40 tgggttggtgg tgagggttac aggtgttccc ttctcttact cctgggtgtg gctacaatca 240  
 42 ggtggcgctct agagcagcat ggacaggtgt ggtaagggga gtcttctcat tatgcagaag 300  
 44 tcatcaactt aaatctctgt cagatctacc tttatgttagc cccgcagtcg cgccgattga 360  
 46 gcgggctcgc ggcgctgggt tcctggtctc cggccaggg ca atg ttc cgc acg 414  
 47 Met Phe Arg Thr  
 48 1  
 50 gca gtg atg atg gcg gcc agc ctg gcg ctg acc ggg gct gtg gtg gct 462  
 51 Ala Val Met Met Ala Ala Ser Leu Ala Leu Thr Gly Ala Val Val Ala  
 52 5 10 15 20  
 54 cac gcc tac tac ctc aaa cac cag ttc tac ccc act gtg gtg tac ctg 510  
 55 His Ala Tyr Tyr Leu Lys His Gln Phe Tyr Pro Thr Val Val Tyr Leu  
 56 25 30 35  
 58 acc aag tcc agc ccc agc atg gca gtc ctg tac atc cag gcc ttt gtc 558  
 59 Thr Lys Ser Ser Pro Ser Met Ala Val Leu Tyr Ile Gln Ala Phe Val  
 60 40 45 50  
 62 ctt gtc ttc ctt ctg ggc aag gtg atg ggc aag gtg ttc ttt ggg caa 606  
 63 Leu Val Phe Leu Leu Gly Lys Val Met Gly Lys Val Phe Phe Gly Gln  
 64 55 60 65  
 66 ctg agg gca gca gag atg gag cac ctt ctg gaa cgt tcc tgg tac gcc 654

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67	Leu	Arg	Ala	Ala	Glu	Met	Glu	His	Leu	Leu	Glu	Arg	Ser	Trp	Tyr	Ala	
68	70				75				80								
70	gtc	aca	gag	act	tgt	ctg	gcc	ttc	acc	gtt	ttt	cgg	gat	gac	ttc	agc	702
71	Val	Thr	Glu	Thr	Cys	Leu	Ala	Phe	Thr	Val	Phe	Arg	Asp	Asp	Phe	Ser	
72	85				90				95							100	
74	ccc	cgc	ttt	gtt	gca	ctc	ttc	act	ctt	ctt	ctc	ttc	ctc	aaa	tgt	ttc	750
75	Pro	Arg	Phe	Val	Ala	Leu	Phe	Thr	Leu	Leu	Phe	Leu	Lys	Cys	Phe		
76					105				110							115	
78	cac	tgg	ctg	gct	gag	gac	cgt	gtg	gac	ttt	atg	gaa	cgc	agc	ccc	aac	798
79	His	Trp	Leu	Ala	Glu	Asp	Arg	Val	Asp	Phe	Met	Glu	Arg	Ser	Pro	Asn	
80					120				125							130	
82	atc	tcc	tgg	ctc	ttt	cac	tgc	cgc	att	gtc	tct	ctt	atg	ttc	ctc	ctg	846
83	Ile	Ser	Trp	Leu	Phe	His	Cys	Arg	Ile	Val	Ser	Leu	Met	Phe	Leu	Leu	
84					135				140							145	
86	ggc	atc	ctg	gac	ttc	ctc	ttc	gtc	agc	cac	gcc	tat	cac	agc	atc	ctg	894
87	Gly	Ile	Leu	Asp	Phe	Leu	Phe	Val	Ser	His	Ala	Tyr	His	Ser	Ile	Leu	
88					150				155							160	
90	acc	cgt	ggg	gcc	tct	gtg	cag	ctg	gtg	ttt	ggc	tat	gag	tat	gcc	atc	942
91	Thr	Arg	Gly	Ala	Ser	Val	Gln	Leu	Val	Phe	Gly	Phe	Glu	Tyr	His	Ile	
92					165				170							180	
94	ctg	atg	acg	atg	gtg	ctc	acc	atc	ttc	atc	aag	tat	gtg	ctg	cac	tcc	990
95	Leu	Met	Thr	Met	Val	Leu	Thr	Ile	Phe	Ile	Lys	Tyr	Val	Leu	His	Ser	
96					185				190							195	
98	gtg	gac	ctc	cag	agt	gag	aac	ccc	tgg	gac	aac	aag	gct	gtg	tac	atg	1038
99	Val	Asp	Leu	Gln	Ser	Glu	Asn	Pro	Trp	Asp	Asn	Lys	Ala	Val	Tyr	Met	
100					200				205							210	
102	ctc	tac	aca	gag	ctg	ttt	aca	ggc	ttc	atc	aag	gtt	ctg	ctg	tac	atg	1086
103	Leu	Tyr	Thr	Glu	Leu	Phe	Thr	Gly	Phe	Ile	Lys	Val	Leu	Leu	Tyr	Met	
104					215				220							225	
106	gcc	ttc	atg	acc	atc	atg	atc	aag	gtg	cac	acc	ttc	cca	ctc	ttt	gcc	1134
107	Ala	Phe	Met	Thr	Ile	Met	Ile	Lys	Val	His	Thr	Phe	Pro	Leu	Phe	Ala	
108					230				235							240	
110	atc	cgg	ccc	atg	tac	ctg	gcc	atg	aga	cag	ttc	aag	aaa	gct	gtg	aca	1182
111	Ile	Arg	Pro	Met	Tyr	Leu	Ala	Met	Arg	Gln	Phe	Lys	Lys	Ala	Val	Thr	
112					245				250							260	
114	gat	gcc	atc	atg	tct	cgc	cga	gcc	atc	cgc	aac	atg	aac	acc	ctg	tat	1230
115	Asp	Ala	Ile	Met	Ser	Arg	Arg	Ala	Ile	Arg	Asn	Met	Asn	Thr	Leu	Tyr	
116					265				270							275	
118	cca	gat	gcc	acc	cca	gag	gag	ctc	cag	gca	atg	gac	aat	gtc	tgc	atc	1278
119	Pro	Asp	Ala	Thr	Pro	Glu	Glu	Leu	Gln	Ala	Met	Asp	Asn	Val	Cys	Ile	
120					280				285							290	
122	atc	tgc	cga	gaa	gag	atg	gtg	act	ggt	gcc	aag	aga	ctg	ccc	tgc	aac	1326
123	Ile	Cys	Arg	Glu	Glu	Met	Val	Thr	Gly	Ala	Lys	Arg	Leu	Pro	Cys	Asn	
124					295				300							305	
126	cac	att	ttc	cat	acc	agc	tgc	ctg	cgc	tcc	tgg	ttc	cag	cgg	cag	cag	1374
127	His	Ile	Phe	His	Thr	Ser	Cys	Leu	Arg	Ser	Trp	Phe	Gln	Arg	Gln	Gln	
128					310				315							320	
130	acc	tgc	ccc	acc	tgc	cgt	atg	gat	gtc	ctt	cgt	gca	tcg	ctg	cca	gcg	1422
131	Thr	Cys	Pro	Thr	Cys	Arg	Met	Asp	Val	Leu	Arg	Ala	Ser	Leu	Pro	Ala	

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134	cag tca cca cca ccc ccg gag cct gcg gat	cag ggg cca ccc cct gcc		1470	
135	Gln Ser Pro Pro Pro Pro Glu Pro Ala Asp	Gln Gly Pro Pro Pro Ala			
136	345	350	355		
138	ccc cac ccc cca cca ctc ttg cct cag	ccc ccc aac ttc ccc cag ggc		1518	
139	Pro His Pro Pro Leu Leu Pro Gln Pro Pro Asn Phe	Pro Gln Gly			
140	360	365	370		
142	ctc ctg cct cct ttt cct cca ggc atg ttc cca	ctg tgg ccc ccc atg		1566	
143	Leu Leu Pro Pro Phe Pro Pro Gly Met Phe Pro	Leu Trp Pro Pro Met			
144	375	380	385		
146	ggc ccc ttt cca cct gtc ccg cct ccc ccc agc	tca gga gag gct gtg		1614	
147	Gly Pro Phe Pro Pro Val Pro Pro Pro Ser Ser	Gly Glu Ala Val			
148	390	395	400		
150	gct cct cca tcc acc agt gca gca gcc ctt tct	cgg ccc agt gga gca		1662	
151	Ala Pro Pro Ser Thr Ser Ala Ala Leu Ser Arg	Pro Ser Gly Ala			
152	405	410	415	420	
154	gct aca acc aca gct gct ggc acc agt gct act	gct gct tct gcc aca		1710	
155	Ala Thr Thr Thr Ala Ala Gly Thr Ser Ala Thr	Ala Ala Ser Ala Thr			
156	425	430	435		
158	gca tct ggc cca ggc tct ggc tct gcc cca gag	gct ggc cct gcc cct		1758	
159	Ala Ser Gly Pro Gly Ser Gly Ser Ala Pro Glu	Ala Gly Pro Ala Pro			
160	440	445	450		
162	ggt ttc ccc ttc cct ccc tgg atg ggt atg ccc	ctg cct cca ccc		1806	
163	Gly Phe Pro Phe Pro Pro Trp Met Gly Met Pro	Leu Pro Pro Pro			
164	455	460	465		
166	ttt gcc ttc ccc cca atg cct gtg ccc cct	gcg ggc ttt gct ggg ctg		1854	
167	Phe Ala Phe Pro Pro Met Pro Val Pro Pro Ala	Gly Phe Ala Gly Leu			
168	470	475	480		
170	acc cca gag gag cta cga gct ctg gag ggc	cat gag cgg cag cac ctg		1902	
171	Thr Pro Glu Glu Leu Arg Ala Leu Glu Gly	His Glu Arg Gln His Leu			
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174	gag gcc cgg ctg cag agc ctg cgt aac atc	cac aca ctg ctg gac gcc		1950	
175	Glu Ala Arg Leu Gln Ser Leu Arg Asn Ile	His Thr Leu Leu Asp Ala			
176	505	510	515		
178	gcc atg ctg cag atc aac cag tac ctc acc	gtg ctg gcc tcc ttg ggg		1998	
179	Ala Met Leu Gln Ile Asn Gln Tyr Leu Thr Val	Leu Ala Ser Leu Gly			
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182	ccc ccc cgg cct gcc act tca gtc aac tcc	act gag ggg act gcc act		2046	
183	Pro Pro Arg Pro Ala Thr Ser Val Asn Ser Thr	Glu Gly Thr Ala Thr			
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186	aca gtt gtt gct gct gcc tcc tcc acc agc	atc cct agc tca gag gcc		2094	
187	Thr Val Val Ala Ala Ser Ser Thr Ser Ile	Pro Ser Ser Glu Ala			
188	550	555	560		
190	acg acc cca acc cca gga gcc tcc cca cca	gcc cct gaa atg gaa agg		2142	
191	Thr Thr Pro Thr Pro Gly Ala Ser Pro Pro Ala	Pro Glu Met Glu Arg			
192	565	570	575	580	
194	cct cca gct cct gag tca gtg ggc aca gag	gag gag atg cct gag gat gga		2190	
195	Pro Pro Ala Pro Glu Ser Val Gly Thr Glu	Glu Met Pro Glu Asp Gly			
196	585	590	595		

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199	Glu	Pro	Asp	Ala	Ala	Glu	Leu	Arg	Arg	Arg	Arg	Leu	Gln	Lys	Leu	Glu		
200				600				605						610				
202	tct	cct	gtt	gcc	cac	tga	ca	tc	gcccc	ca	cc	agcccc	ag	c	ct	tg	ct	2286
203	Ser	Pro	Val	Ala	His													
204				615														
206	cttt	gag	ca	cc	ct	cg	ct	g	cc	at	gt	tc	cc	ag	ct	cc	tc	2346
208	gcac	cagg	ga	gt	at	cc	cc	ta	cc	cc	at	cc	cc	at	gg	ta	gg	2406
210	aagg	gg	tt	cc	cc	at	tt	cc	cc	cc	at	gg	gg	at	tc	gg	gt	2466
212	tcc	agg	cct	tc	tcc	aa	ct	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	2526
214	ttt	agg	cct	tt	ttt	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	2586
216	cca	agg	cct	ta	ttt	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	2646
218	cca	agg	gt	g	act	cc	ca	gg	ct	gg	gg	gg	gg	gg	gg	gg	gg	2706
220	cta	ag	act	gg	tac	cc	cc	at	tt	tt	cc	tt	cc	tt	cc	tt	cc	2766
222	tg	g	ct	gt	tg	cc	cc	t	tt	tt	cc	tt	cc	tt	cc	tt	cc	2826
224	g	aa	agg	aa	at	gt	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	2886
226	c	c	tt	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	2946
228	c	ag	cc	act	gc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	3006
230	t	cc	c	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	cc	3066
232	at	ta	tt	tc	t	tt	tt	tt	tt	tt	tt	tt	tt	tt	tt	tt	tt	3126
234	cc	cc	gg	gg	gg	aa	aa	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	3186
236	t	g	cc	aa	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	gg	3246
238	gt	t	a	c	a	g	g	a	g	g	a	g	g	a	g	g	g	3306
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255					20				25						30			
257	Val	Val	Tyr	Leu	Thr	Lys	Ser	Ser	Pro	Ser	Met	Ala	Val	Leu	Tyr	Ile		
258					35				40						45			
260	Gln	Ala	Phe	Val	Leu	Val	Phe	Leu	Leu	Gly	Lys	Val	Met	Gly	Lys	Val		
261		50			55				60									
263	Phe	Phe	Gly	Gln	Leu	Arg	Ala	Ala	Glu	Met	Glu	His	Leu	Glu	Arg			
264		65			70				75						80			
266	Ser	Trp	Tyr	Ala	Val	Thr	Glu	Thr	Cys	Leu	Ala	Phe	Thr	Val	Phe	Arg		
267					85				90						95			
269	Asp	Asp	Phe	Ser	Pro	Arg	Phe	Val	Ala	Leu	Phe	Thr	Leu	Leu	Phe			
270			100				~	105						110				
272	Leu	Lys	Cys	Phe	His	Trp	Leu	Ala	Glu	Asp	Arg	Val	Asp	Phe	Met	Glu		
273		115				120								125				
275	Arg	Ser	Pro	Asn	Ile	Ser	Trp	Leu	Phe	His	Cys	Arg	Ile	Val	Ser	Leu		
276		130				135								140				
278	Met	Phe	Leu	Leu	Gly	Ile	Leu	Asp	Phe	Leu	Phe	Val	Ser	His	Ala	Tyr		

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281	His Ser Ile Leu Thr Arg Gly Ala Ser Val Gln Leu Val Phe Gly Phe			
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285	180	185	190	
287	Val Leu His Ser Val Asp Leu Gln Ser Glu Asn Pro Trp Asp Asn Lys			
288	195	200	205	
290	Ala Val Tyr Met Leu Tyr Thr Glu Leu Phe Thr Gly Phe Ile Lys Val			
291	210	215	220	
293	Leu Leu Tyr Met Ala Phe Met Thr Ile Met Ile Lys Val His Thr Phe			
294	225	230	235	240
296	Pro Leu Phe Ala Ile Arg Pro Met Tyr Leu Ala Met Arg Gln Phe Lys			
297	245	250	255	
299	Lys Ala Val Thr Asp Ala Ile Met Ser Arg Arg Ala Ile Arg Asn Met			
300	260	265	270	
302	Asn Thr Leu Tyr Pro Asp Ala Thr Pro Glu Glu Leu Gln Ala Met Asp			
303	275	280	285	
305	Asn Val Cys Ile Ile Cys Arg Glu Glu Met Val Thr Gly Ala Lys Arg			
306	290	295	300	
308	Leu Pro Cys Asn His Ile Phe His Thr Ser Cys Leu Arg Ser Trp Phe			
309	305	310	315	320
311	Gln Arg Gln Gln Thr Cys Pro Thr Cys Arg Met Asp Val Leu Arg Ala			
312	325	330	335	
314	Ser Leu Pro Ala Gln Ser Pro Pro Pro Glu Pro Ala Asp Gln Gly			
315	340	345	350	
317	Pro Pro Pro Ala Pro His Pro Pro Pro Leu Leu Pro Gln Pro Pro Asn			
318	355	360	365	
320	Phe Pro Gln Gly Leu Leu Pro Pro Phe Pro Pro Gly Met Phe Pro Leu			
321	370	375	380	
323	Trp Pro Pro Met Gly Pro Phe Pro Pro Val Pro Pro Pro Pro Ser Ser			
324	385	390	395	400
326	Gly Glu Ala Val Ala Pro Pro Ser Thr Ser Ala Ala Ala Leu Ser Arg			
327	405	410	415	
329	Pro Ser Gly Ala Ala Thr Thr Ala Ala Gly Thr Ser Ala Thr Ala			
330	420	425	430	
332	Ala Ser Ala Thr Ala Ser Gly Pro Gly Ser Gly Ser Ala Pro Glu Ala			
333	435	440	445	
335	Gly Pro Ala Pro Gly Phe Pro Phe Pro Pro Pro Trp Met Gly Met Pro			
336	450	455	460	
338	Leu Pro Pro Pro Phe Ala Phe Pro Pro Met Pro Val Pro Pro Ala Gly			
339	465	470	475	480
341	Phe Ala Gly Leu Thr Pro Glu Glu Leu Arg Ala Leu Glu Gly His Glu			
342	485	490	495	
344	Arg Gln His Leu Glu Ala Arg Leu Gln Ser Leu Arg Asn Ile His Thr			
345	500	505	510	
347	Leu Leu Asp Ala Ala Met Leu Gln Ile Asn Gln Tyr Leu Thr Val Leu			
348	515	520	525	
350	Ala Ser Leu Gly Pro Pro Arg Pro Ala Thr Ser Val Asn Ser Thr Glu			
351	530	535	540	

**VERIFICATION SUMMARY**

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